

5 propagated to a corresponding global register in the other of said one or more register files,
6 and wherein when a value is written to one of said Q-number of said registers which is a
7 private register within one of said one or more register files, said value is not propagated to a
8 corresponding register in the other of said one or more register files.

1 27. The computer processing architecture as recited in claim 26, wherein
2 Q=64, and a 64-bit special register stores bits indicating whether a register in a register file is
3 a private register or a global register, each bit in the 64-bit special register corresponding to
4 one of said registers in said register file.

1 28. The computer processing architecture as recited in claim 26, wherein
2 said program counter register is a global register.

1 29. In a processing core comprising a processing pipeline having N-
2 number of processing paths, each of said processing paths for processing instructions on M-
3 bit data words, and one or more register files having Q-number of registers, said Q-number of
4 registers being M-bits wide, a method for jumping from one location in a program to another
5 location in a program, comprising the steps of:

6 storing a current program counter value in a program counter register, which is
7 one of said Q-number of register in at least one of said one or more register files; and

8 adding a value to said current program counter value stored in said program
9 counter register using a standard add operation.

1 30. In a processing core comprising a processing pipeline having N-
2 number of processing paths, each of said processing paths for processing instructions on M-
3 bit data words, and one or more register files having Q-number of registers, said Q-number of
4 registers being M-bits wide, a method for calculating a memory address, comprising the steps
5 of:

6 storing a current program counter value in a program counter register which is
7 one of said Q-number of register in at least one of said one or more register files; and

8 adding a value to said current program counter value stored in said program
9 counter register using a standard add operation.